

INTERNATIONAL SEARCH REPORT

International Application No
PCT/JP2004/019697

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H05B41/288

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H05B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 291 945 B1 (TOYAMA KOICHI ET AL) 18 September 2001 (2001-09-18)	1,20
A	column 1, line 51 - line 64; figures 1,2,9 column 3, line 38 - column 11, line 50 column 18, line 25 - line 32	2-18
Y		19
X	PATENT ABSTRACTS OF JAPAN vol. 2002, no. 12, 12 December 2002 (2002-12-12) & JP 2002 216982 A (MATSUSHITA ELECTRIC WORKS LTD), 2 August 2002 (2002-08-02) abstract; figures 1,6	1
Y	EP 1 351 276 A (OSRAM-SYLVANIA INC) 8 October 2003 (2003-10-08) the whole document	19
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

3 March 2005

Date of mailing of the international search report

11/03/2005

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2003/160576 A1 (SUZUKI TOSHIO) 28 August 2003 (2003-08-28) the whole document	1-20
A	US 5 481 163 A (NAKAMURA ET AL) 2 January 1996 (1996-01-02) the whole document	1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP2004/019697

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6291945	B1	18-09-2001	JP 3500815 B2 JP 9073991 A DE 19626101 A1	23-02-2004 18-03-1997 02-01-1997
JP 2002216982	A	02-08-2002	CN 1456029 A DE 10290424 T0 WO 02056645 A2 US 2003111969 A1	12-11-2003 21-08-2003 18-07-2002 19-06-2003
EP 1351276	A	08-10-2003	US 2003189408 A1 CA 2415015 A1 EP 1351276 A2 JP 2003303571 A	09-10-2003 04-10-2003 08-10-2003 24-10-2003
US 2003160576	A1	28-08-2003	CN 1465210 A EP 1404161 A1 WO 02102120 A1	31-12-2003 31-03-2004 19-12-2002
US 5481163	A	02-01-1996	JP 3280475 B2 JP 7045390 A DE 4428850 A1	13-05-2002 14-02-1995 09-02-1995